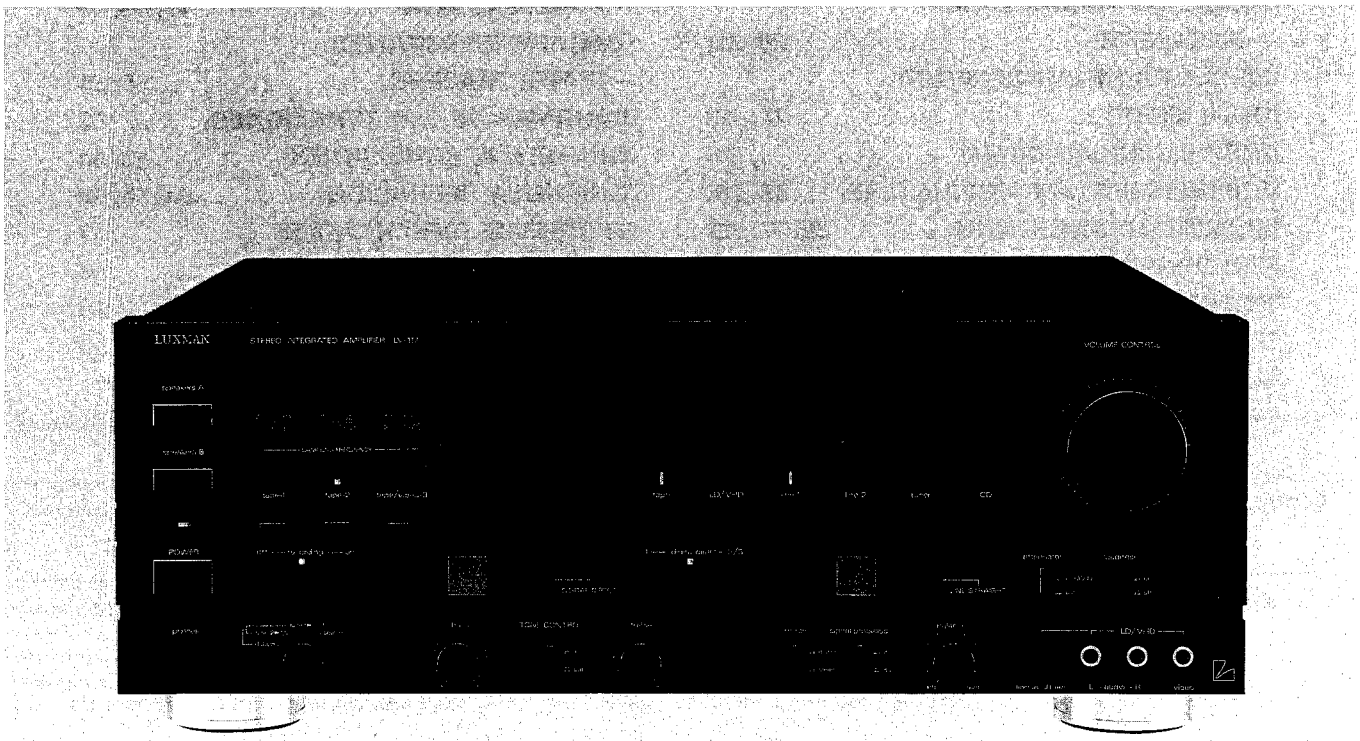
LUXMAN

OWNER'S MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUAL DE OPERACION

LV-117

Stereo Integrated Amplifier



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WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: To prevent electric shock, do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

AVIS: Pour éviter tout risque d'électrocution, n'exposez pas cet appareil à l'humidité.

ATTENTION: Pour prévenir les chocs électriques, ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

ACHTUNG: Zur Verhütung von Bränden und elektrischen Schlägen, dieses Gerät weder Regen noch Feuchtigkeit aussetzen.

ADVERTENCIA: A fin de prevenir incendios y descargas eléctricas, no exponga este aparato a la lluvia ni a la humedad.

INTRODUCTION

WELCOME!

Luxman welcomes you to the growing number of discerning audiophiles who own and operate Luxman Audio and Audio-Video Products. We take great pride in the long tradition of excellence in sonic quality that the Luxman name represents. This manual has been prepared to help you to maximize your enjoyment of the outstanding performance and features of your new Luxman LV-117.

This integrated amplifier has been designed for highest sonic purity. Voltage driven amplification with FET, Triple differential input stages, triple darlington outputs and driver topology, optical and coaxial direct digital inputs with built-in DAC; 4 times over-sampling filter, high current high power output into low impedance loads, massive power supply and heatsink designs . . . . all contribute to the achievement of this goal.

To realize the exceptional performance for which this Luxman LV-117 is capable, it is necessary that all signal sources and speaker systems used with it are of the highest sonic quality. We recommend complementary Luxman components wherever possible.

Please study this manual carefully and become acquainted with all the special features, operation and capabilities of your new Luxman LV-117. Should you have any questions, or desire information on other Luxman products, please contact your local Luxman dealer.

WHEN YOU OPEN THE BOX

Before any Luxman product leaves the factory it is carefully inspected for physical imperfections as a routine part of Luxman's systematic quality control. This, along with full electrical testing, should insure quality craftsmanship and performance. After you have unpacked the unit, inspect it for any physical damage. Save the shipping carton and all packing materials, as they are essential to reduce to a minimum the possibility of transportation damage, should the product ever need to be shipped again. In the unlikely event that damage has occurred, notify your dealer immediately and request the name of the carrier so that a written claim to cover shipping damages can be initiated.

THE RIGHT TO ANY CLAIM AGAINST A PUBLIC CARRIER CAN BE FORFEITED IF THE CARRIER IS NOT NOTIFIED PROMPTLY AND IF THE SHIPPING CARTON AND PACKING MATERIAL ARE NOT AVAILABLE FOR INSPECTION. SAVE ALL PACKING MATERIALS UNTIL THE CLAIM HAS BEEN SETTLED.

INSTALLATION AND PLACEMENT

Because some heat is generated by the LV-117, adequate air circulation must be provided to maintain cool operation. Leave adequate space around the amplifier (at least 3 inches on the top and 1 inch on the sides and rear) for proper air circulation. Also, the Luxman LV-117 should not be completely enclosed with other heat producing components. If the Luxman LV-117 is going to be mounted in an enclosed cabinet, it is recommended that the back of the cabinet have vents to allow air to circulate around the amplifier. With these considerations implemented, the Luxman LV-117 should provide exceptional performance in any reasonable environment.

Of course, such normal considerations as protection from excessive dust and moisture should always be observed. The Luxman LV-117 integrated amplifier has been carefully designed with high quality components so that long term undiminished performance may be expected when it is operated in accordance with the instructions provided.

SPECIAL FEATURES

The LV-117 employs some of the most refined and advanced technology available to achieve Luxman's constant quest for sonic purity. Examples are as follows:

HIGH CURRENT, HIGH SPEED, VOLTAGE DRIVEN POWER AMPLIFIER

A new design, the circuit topology is configured with triple differential FET input and pre-driver, devices followed by triple darlington connected driver and output stages using dual paralleled power transistors. This arrangement allows the highly linear, high speed, voltage amplification mode for optimum dynamic performance free of T.I.M. and skew indicated distortion.

In addition, the rugged dual bi-polar output devices allow low impedance drive into real-world speaker loads, delivering over 300 Watts with ease into 2 ohms.

DIGITAL DIRECT INPUTS (OPTICAL AND CO-AX LINKS)

The direct digital connection, pioneered by Luxman, allows direct digital transmission, via optical or co-axial cable, between the LV-117 and digital sources, CD players (such as Luxman D-113, D-117, D-109), DAT decks (such as Luxman KD-117), Digital Broadcast Satellite (DBS) FM receivers or any other source having digital outputs that conform to the standard Phillips/Sony format, may be used with the LV-117.

This single connection eliminates the logic switching noise that can radiate from servo and digital switching circuits within such sources as well as removing the potential noise and distortion effects of analog patch cords. The result is a new level of perfection in sonic quality.

LINE STRAIGHT

Activating this switch on the LV-117 front panel allows a direct connection from any of the source (line) inputs to the power amplifier, bypassing, when desired, all controls and many switching functions, except volume control (refer to block diagram). The shortest direct path to the power amp is thus achieved, ensuring best accuracy, imaging and impact.

HIGH ENERGY POWER SUPPLY

A massive double shielded power transformer coupled with fast-recovery diodes and 30,000μFds of steady state power necessary for ever the most demanding of music transients.

PRECISION 16 BIT DAC WITH 4 x OVERSAMPLING DIGITAL FILTER

This precision 16 bit digital to analog counter located in the LV-117 is what makes the digital Direct connector possible. At is located and portioned to ensure analog signal purity for all the surrounding amplifier circuitry.

A high resolution 16 bit 4 times over sampling digital F.I.R. (Finite Impulse Response) filter permits extremely rapid roll-off of the undesired ultra-high frequencies before D/A conversion, without any of the phase distortion of "brick wall" analog filters used with conventional "single sampling" data rate converters.

In addition, 4 times oversampling moves the remaining ultra-sonic frequencies well above 150 kHz, instead of just over 24 kHz, allowing the use of a gradual 5th order GIC Butterworth linear phase analog filter. Such a filter virtually eliminates phase and transient distortion effects, for pure, accurate around reproduction.

DIGITAL OUTPUT JACK

Allows direct digital recording on a second DAT deck while listening to a direct digital playback (at 48 kHz or 32 kHz sampling rate) on the first DAT deck.

SIGNAL PROCESSOR JACKS AND SWITCH

An equalizer or other desired signal processing equipment may be connected without the need to give up a tape jack facility.

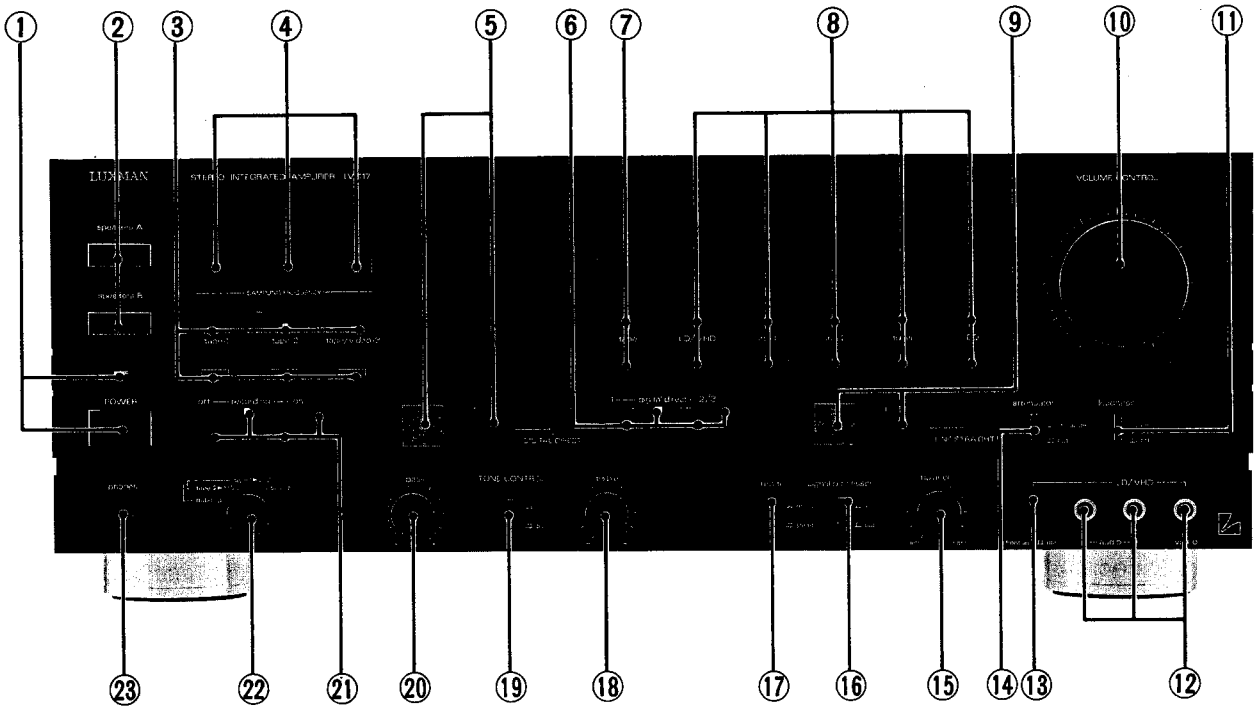
VIDEO SWITCHING

Two buttons, LD/VHD and TAPE/VIDEO-3 combined with their corresponding input and output jacks on the rear panel, permit connection of outputs from A/V sources to a monitor and using from one VCR to another. Professional-grade video amplifiers eliminate switching losses.

AUDIO QUALITY PARTS

Non-magnetic parts, such as copper foil polypropylene and polystyrene capacitors and low noise resistors, are used throughout the analog section. Such audio quality parts insure the purest signal transfer possible.

CONTROLS & SWITCHES — FRONT PANEL



1. POWER Button and Indicator

Pressing this button turns the unit on.

2. SPEAKERS A and B Buttons

Two sets of stereo speaker systems may be used with the LV-117; A and B buttons corresponding with A and B speaker terminals on the back panel (item #31). You may choose independent or simultaneous operation of the two systems by using these buttons.

NOTE: The impedance of each speaker system should equal or exceed 8 ohms when driving two sets at the same time.

3. TAPE-1, TAPE-2, TAPE/VIDEO-3 Buttons and Indicators

For selection of connected tape decks 1, 2, or 3 for monitoring or playback purposes.
The TAPE (monitor) button (item #7) must be depressed for these buttons to operate.

4. SAMPLING FREQUENCY Indicators

The built-in DAC will automatically switch to the correct sampling frequency of the Digital Source connected to the DIGITAL IN jacks. The standard sampling frequencies are as follows:

32 kHz: *DBS-A mode, or DAT long play mode.

44 kHz: CD players or DAT commercially pre-recorded tapes.

48 kHz: DBS-B mode, or DAT tapes recorded by consumer DAT decks.

* DBS is an abbreviation for "Direct Broadcast Satellite" FM stereo broadcasts.

5. DIGITAL DIRECT Button and Indicator

When depressed, the digital source selected by the DIGITAL DIRECT buttons, item #6, will be activated.

NOTE: This button and indicator must be in the OFF position for any of the audio source selections to operate.

6. DIGITAL DIRECT 1 and 2/3 Selectors and Indicators

These provide selection between 2 digital sources connected to the rear panel Digital in jacks. The DIGITAL DIRECT button, item #5, must be depressed for these to operate.

7. TAPE (monitor) Button and Indicator

Activates the three tape buttons, item #3, for monitoring or playback operations of audio or video tape decks.

CONTROLS & SWITCHES — FRONT PANEL

NOTE: This switch overides all INPUT SELECTOR sources, item #8. Always leave in the OFF (out) position when not in use.

8. INPUT SELECTOR Buttons and Indicators

These select audio and video source, a total of 5 as follows: LD/VHF, LINE-1, LINE-2, TUNER and CD.

9. LINE STRAIGHT Button and Indicator

For optimum sound quality from any input source selection, press this button to bypass the tone controls and other switching functions. See SPECIAL FEATURES section, page 4, for further details.

10. VOLUME Control

Allows precision, low noise adjustment of volume level. It is recommended that the volume control be set to a low position prior to power turn on and when switching between sources.

11. LOUDNESS Button

Depressing this button introduces a moderate boost of the very low and high frequencies when the volume control is set below the 12-o'clock position. This compensates for the human ear's characteristic at low listening levels.

12. LD/VHD FRONT INPUT Jacks

These jacks allow the temporary connection of a VCR, Video Disc Player, CD, Cassette Deck, etc. Be sure that FRONT/REAR button (item #13) and the LD/VHD INPUT SELECTOR button (item #8) and both pushed in when using these jacks.

13. FRONT/REAR Button

Selects the front LD/VHD jacks in the IN position and the rear LD/VHD jacks in the OUT position.

14. ATTENUATOR Button

When depressed it provides an instant 30 dB volume reduction. Use for temporary interruptions of a listening session (phone answering, etc.) or for smoother volume control action at lower listening levels.

15. BALANCE Control

Adjust for equal volume level between channels. Normally, with today's high quality sources, it is seldom necessary to move this control from its precision center detent position.

16. SIGNAL PROCESSOR Button

When depressed, this button engages an equalizer or other signal processor connected to the rear panel SIGNAL PROCESSOR jacks.

NOTE: When "LINE STRAIGHT" is selected, the signal processor jacks are bypassed.

17. MODE (Mono/Stereo) Button

Place in MONO (in) position for mono sources, for balance control adjustment for lower noise operation from high noise stereo sources, or for checking speaker phasing. Otherwise, leave it in the STEREO (out) position.

18. TREBLE Control

This control will increase or decrease high frequency content in the program material. At the center detent position, a flat frequency response results.

NOTE: The TONE button must be depressed to the "ON" position to activate the TREBLE Control.

19. TONE Button

When depressed, the bass and treble tone control circuits are activated. In the "OFF" position, the tone circuits are completely bypassed, resulting in ruler-flat frequency response.

20. BASS Control

This control will increase or decrease low frequency content in the program material. In the center detent position, a flat frequency response results.

NOTE: The TONE button must be depressed to the "ON" position to activate the BASS Control.

21. RECORDING-ON/OFF Buttons and Indicators

When the RECORDING indicator is ON, any source selected by the INPUT SELECTOR, item #8 is available at the REC out jacks, of each of the 3 tape facilities, for recording. Press the RECORDING-OFF button if source recording is not desired.
Press the RECORDING-ON button to activate the TAPE DUBBING selector, item #22.

CONTROLS & SWITCHES — FRONT PANEL

22. TAPE DUBBING Selector

This selector allows dubbing between decks is two ways:

1) from deck 2 to decks 1 and 3 (tape 2 ▶ 1/3).

2) from deck 1 to decks 2 and 3 (tape 1 ▶ 2/3).

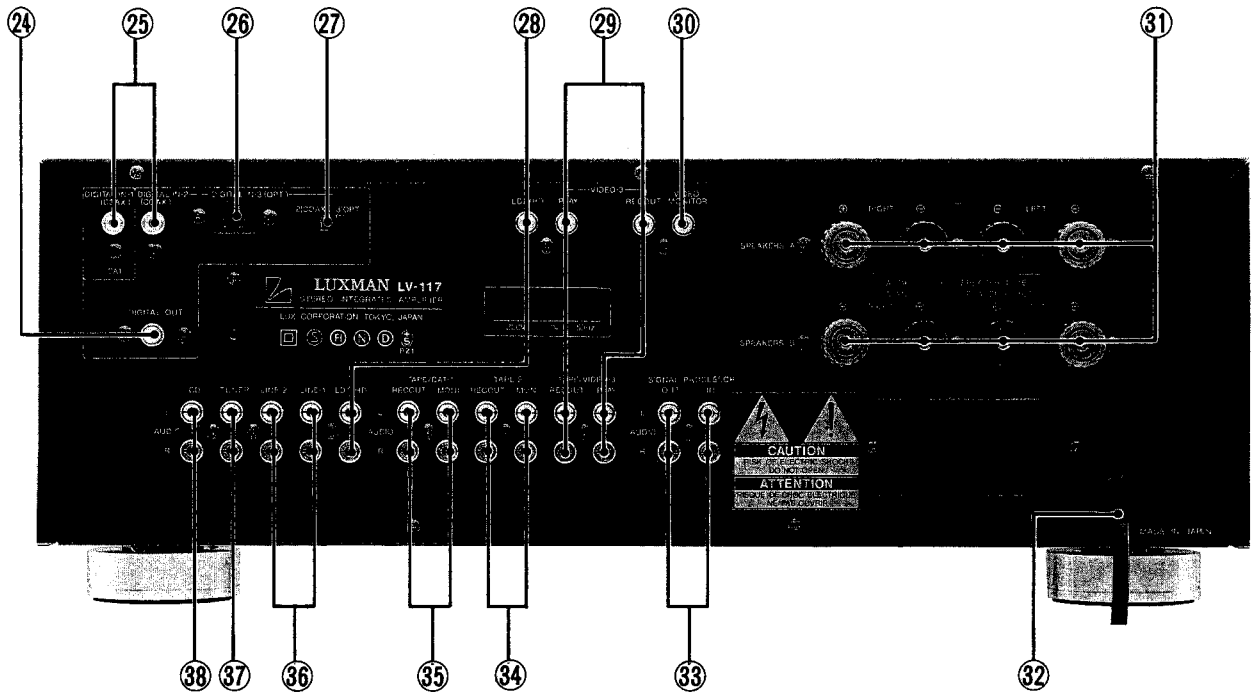
When placed in the SOURCE position, sources selected by the INPUT SELECTOR (item #8) can be recorded at each of the 3 tape decks.
Video copies can only be made from a VCR connected at the LD/VHD jacks to a 2nd VCR at the TAPE/VIDEO-3 jacks with the RECORDING indicator ON (RECORDING ON button, item #21 depressed).

NOTE: The RECORDING-ON button, item #21, must be depressed (indicator ON), for all dubbing operations.

23. PHONES Jack

Connection of stereophonic headphones to this jack allows private listening. There is signal at the jack at all times. Placing the speaker switches A and B (item #2) in the OUT position, will allow private listening.

JACKS & TERMINALS — REAR PANEL



24. DIGITAL OUT Jack

Connect to the DIGITAL INPUT Jack of a 2nd DAT deck. This allows a direct digital copy (at 48 or 32 kHz sampling rates) from the first DAT deck connected to DIGITAL IN (1 or 2) jacks of the LV-117, while simultaneously listening to the DAT tape through the LV-117.

25. DIGITAL IN 1/2 Jacks

Use these to connect to the digital outputs of a CD player, a DAT deck, a DBS tuner, or any other digital source conforming to the Phillips/Sony standard format. See "Special Features" section for more details.

26. OPT. Input Jack (DIGITAL IN-3)

Allows the connection of a fiber optic type connecting cable, such as that supplied with the Luxman D-117 CD player and KD-117 DAT deck.

27. DIGITAL IN-2/3 Selector Switch

Selects either the COAX or OPT. digital input jacks. The COAX jack allows connection of a co-axial shielded lead patch cord.

28. LD/VHD Input Jacks

Connect a VCR, Laser/Video Disc Player, etc., to these input jacks for playback purposes only. Connect the audio LINE OUT and VIDEO OUT jacks of the VCR, LD, etc. to the LD/VHD AUDIO IN AND VIDEO PLAY (IN) jacks of the LV-117 respectively.

29. TAPE/VIDEO-3 Jacks

Use these for the connection of a video cassette recorder (VCR). Be sure to correctly connect the audio LINE IN and LINE OUT jacks of the VCR to the TAPE/VIDEO-3 AUDIO REC OUT and PLAY jacks of the LV-117 and the VIDEO IN AND VIDEO OUT jacks of the VCR to the VIDEO-3 REC OUT and PLAY jacks of the LV-117 respectively.

30. VIDEO MONITOR Jack

Connect this video output jack to the video input jack of a video monitor or to a TV receiver that has a video input jack.

31. SPEAKER Terminals

You may connect 2 pairs of stereo speaker systems to these terminals of the LV-117 to the corresponding RED (+) and BLACK (—) terminals of your speakers on each channel.

The speaker systems may be switched on and off by the front panel A and B SPEAKERS buttons (item #2).

JACKS & TERMINALS — REAR PANEL

32. AC POWER CORD

The unit features a heavy-duty power cord to ensure high quality sound. Only connect this cord directly to an AC wall outlet. Do NOT connect to the convenience outlets of other equipment.

33. SIGNAL PROCESSOR IN and OUT Jacks

For connection of an equalizer (G-100), Audio/Video selector (T-107) or other signal processor as desired. They are switched in or out by the front panel SIGNAL PROCESSOR button (item #16).

34. TAPE-2 REC OUT and MONI Jacks

Connect a 2nd tape deck to these jacks in the same manner as item #35.

35. TAPE-1 REC OUT and MONI Jacks

Connect the LINE IN and LINE OUT jacks of your audio tape deck to these REC OUT and MONI (monitor) jacks respectively.

36. LINE-1 and LINE-2 Input Jacks

Use these jacks for the connection of any high level system component, such as Luxman's LE-109 phono amplifier, or additional tuners, CD's, tape decks, etc.

37. TUNER Jacks

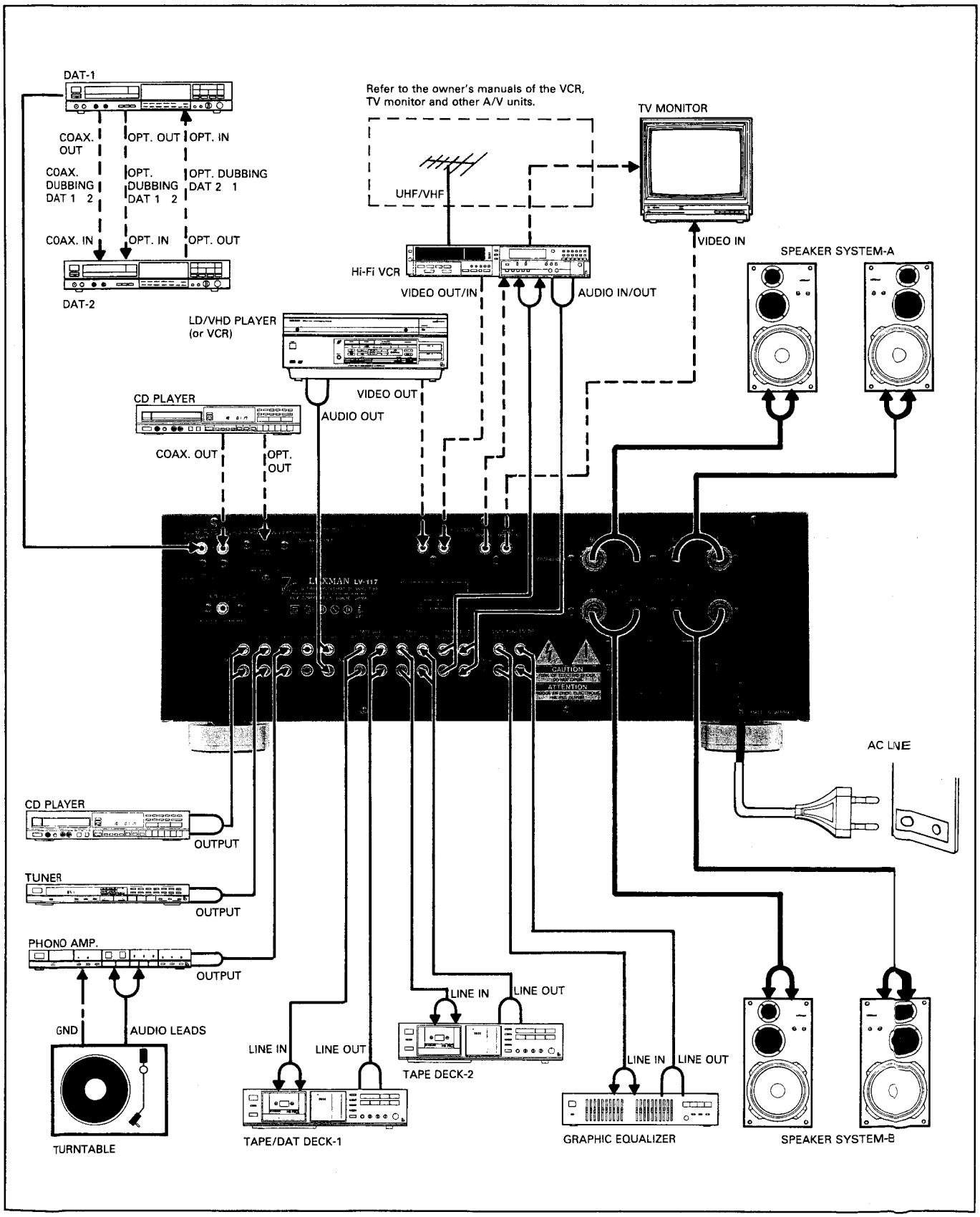
These input jacks are for connection to the output jacks of your FM/AM tuner, such as Luxman's T-117.

38. CD Jacks

This set of jacks are for connection of a compact disc (CD) player. They may also be used for any other high level signal source.

NOTE: See CONNECTION DIAGRAM, page 10, for typical connections to all jacks and terminals (items #24 through 38).

CONNECTION DIAGRAM



CONNECTION GUIDELINES

BEFORE MAKING CONNECTIONS

It is always wise to ensure that all AC line cords of the various components that you are interconnecting are unplugged from the wall outlets during the hook-up process. This will prevent any prevent inadvertent damage to your speakers or amplifier from incorrect control settings or connections.

INTERCONNECTING LEADS (Patch Cords)

Be sure that left and right channel identification is correct when making interconnections. Most patch cords are color coded ends for the right channel and BLACK or WHITE ends for the left channel, to make this job easier.

In addition, all jacks on the rear of the LV-117 have red centers for right channel, white for left and yellow for each video jack.

CONNECTION OF AUDIO AND VIDEO TAPE DECKS

One of the common problems in connecting tape decks is confusing the LINE IN and LINE OUT connections to the amplifier, resulting in no output even in the SOURCE modes. To prevent this, always connect the LINE OUT jacks of the deck to the MONI (monitor) input jacks of the amplifier and connect the LINE IN jacks of the deck to the REC OUT (record out) jacks on the amplifier.

CONNECTION OF VIDEO EQUIPMENT

Follow the connection diagram carefully when connecting video equipment to the LV-117. In addition, be sure to read the owner's manuals of such equipment fully, to ensure proper operation.
It is recommended that only the highest quality TV monitor, Hi-Fi VCR, LD, etc. be used to complement the high performance standards of the Luxman LV-117.

DIGITAL DIRECT CONNECTIONS

These connections are easier, since one lead carries both left and right channels. Just be sure that the DIGITAL OUT jack of the CD or DAT is connected to DIGITAL IN on the LV-117. Also that the DIGITAL OUT jack of the LV-117 is connected to the DIGITAL IN of the 2nd DAT, if used.
When connecting the OPT. IN jack, use the FIBER OPTIC CABLE supplied with the CD or DAT. After connecting it to the OPT. jack, slide the DIGITAL IN-2/3 selector switch to the OPT. position. This digital source will now work in the position of the front panel DIGITAL DIRECT buttons (item #6).
When using the COAX jacks, use a good quality video patch cord with phono plug ends.
Video cords are usually identified with yellow colored ends.

TURNTABLE CONNECTIONS

The LV-117, because of the Digital Direct concept, does not include a Phono pre-amp or phono input jacks. Instead, to elicit the finest sonic performance possible from phono record technology, Luxman provides a separate dedicated phono equalizer amplifier, the LE-109, for this purpose.

To use the LE-109, make connections following the instructions that come with it. The output of the LE-109 can be connected to either the line-1 or line-2 inputs of the LV-117.

SPEAKER CONNECTIONS

The following items should be observed carefully when connecting your speakers:

1. Be sure PHASING is correct by connecting the RED (+) and the BLACK (—) terminals of the LV-117 to the RED (+) and BLACK (—) terminals of your speakers on each channel. Failure to do so will result in drastically reduced bass response and unstable, irregular stereo imaging.

2. To prevent the possibility of shorts, strip back the ends of the speaker leads about 1/2 inch and carefully twist the strands together.
   Loosen the speaker terminal knob by rotating it counter-clockwise. Insert the twisted end and turn clockwise to tighten.

   Inspect carefully to ensure that no frayed strands exist that may short against the metal backpanel.

3. It is recommended that 16 AWG gauge wire, or larger, be used to prevent losses. You may wish to consider some of the commercially available speaker cables that are specifically designed to improve the amplifier to speaker interface.

SIGNAL PROCESSOR CONNECTIONS

Like tape decks, most of these types of equipment have LINE IN and LINE OUT jack identifications. Be sure LINE IN and LINE OUT jacks of the signal processor are connected to the LV-117 SIGNAL PROCESSOR OUT and IN jacks respectively.

OPERATION GUIDELINES

The following procedures assume that all connections have been made according to the "CONNECTION DIAGRAM, page 10.

POWER AND SOURCE SWITCHING

To prevent the possibility of excessive, sudden sound levels, it is recommended that the volume control be placed at a low level position each time the power switch is turned on or when switching between source.

TAPE RECORDING OPERATIONS

To make a tape recording of any source, proceed as follows:

(1) Depress the INPUT SELECTOR button for the source you wish to record.

(2) Depress the RECORDING-ON button (item #21).

(3) Place the TAPE DUBBING Selector in the "SOURCE" position.

(4) The source signal will now be fed to each of the three tape recorders, if connected.
Follow the recording instructions for the tape deck in use.

(5) If you have a 3-head deck, you can monitor the actual recording by depressing the corresponding TAPE-1, -2, or -3 buttons PLUS the TAPE (monitor) button, item #7.
The MONITOR position must also be selected on your tape deck.

TAPE PLAYBACK

Playback from each of the three tape decks can be heard by depressing the corresponding TAPE-1, -2 or -3 buttons, PLUS the TAPE (monitor) button, item #7.

NOTE: The RECORDING-OFF button, item #21 must be in the ON (Indicator ON) position for each of the above operations.

TAPE DUBBING (Audio)

Tape copies (or dubs) can be made between the 3 decks as follows:

(1) Depress the RECORDING-ON button (item #21) to the ON (in) position.

(2) If you wish to copy from deck 2 to decks 1 and 3, place the TAPE DUBBING selector (item #22) in the TAPE 2 ▸ 1/3 position.

(3) In like manner, if you wish to copy from deck 1 to decks 2 and 3, set the TAPE DUBBING selector accordingly.

(4) If the copy decks are 3-head machines, the actual recording can be monitored by depressing the TAPE (monitor) button, item #7, PLUS the desired TAPE-1, -2 or -3 buttons (item #3).

(5) You may make dubs while simultaneously listening to any source selected by the INPUT SELECTOR (item #8). Simply place the TAPE (monitor) button (item #7) in the OUT position during the dubbing operation.

DAT (Digital Audio Tape) DECKS

When using the analog (audio) inputs and outputs of such machines, you would connect them and use them with the LV-117 in the same manner as you would for any audio tape deck.

DIGITAL DIRECT RECORDING WITH DAT DECKS

To make digital direct recordings and dubs, however, it is necessary to observe some guide-lines and limitations follows:

(1) It is not possible to make a direct digital copy from a CD to a DAT; since DAT decks will not record at the 44.1 kHz sampling rate of CD's.

(2) To make a copy of a CD to DAT (provided anti-coly chips are not legislated in the U.S.), it is necessary to record using the analog (audio) connections on the LV-117 just as you would with an audio cassette deck.

(3) Once you have made a recording on a DAT tape, from a CD or any other source, it is then possible to copy or dub this tape, by digital direct, to a second DAT deck using the DIGITAL IN and OUT jacks on the LV-117.
See "DIGITAL DIRECT CONNECTIONS" under "CONNECTION GUIDELINES".

(4) It is also not possible to make a digital direct copy of commercially pre-recorded DAT tapes, since these are also recorded at the 44.1 kHz rate.

Here again, if a copy is desired, it is necessary to record using the analog connections. Subsequent direct digital dubs, at the 48 kHz rate, could then be made as in (3) above.

OPERATION GUIDELINES

SIGNAL PROCESSOR JACKS

When using this facility, the following items should be kept in mind:

(1) Since the signal processor jacks are located downstream from the MODE and TONE controls, the effect of these functions should always be considered relative to the operation of the external processor.

For instance "double boosting" effects can occur with a connected equalizer, causing severe overload distortion, if both the equalizer and tone controls are boosted together in the same frequency range.

(2) When in LINE STRAIGHT operation, the SIGNAL PROCESSOR is completely bypassed.

VIDEO PLAYBACK

Both audio and video playback from the connected A/V systems can be selected by depressing either the LD/VHD button on the INPUT SELECTOR, or, if a VCR is connected to the TAPE/VIDEO-3 and VIDEO-3 jacks, by depressing the TAPE (monitor) and Tape/Video-3 buttons on front panel, items #7 and #3.

VIDEO TAPE RECORDING AND DUBBING

Both the audio sound tracks and video signals from any A/V source can be recorded by a video cassette recorder (VCR) through the LV-117.

To record a laser disc (LD), a TV stereo tuner or a VCR connected to the LD/VHD inputs, proceed as follows:

(1) Depress the RECORDING-OFF button to the "ON" position.

(2) The A/V signals will now be fed to the VCR connected to the TAPE/VIDEO-3, VIDEO-3 jacks. Follow the recording instructions for the VCR in use, being sure to set its input selector to "EXTERNAL" position.

(3) Set the FRONT/REAR LD/VHD button to the REAR (out) position, unless you wish to record from an A/V source connected to the front terminals.

NOTE: You can listen to and view the A/V signal with the TAPE (monitor) button, item #7, in either the IN or OUT positions.

However, since some switching noise may appear on the recorded image, it is recommended that these switches not be manipulated during the recording process.

TV OPERATIONS

You can watch and/or record off-the-air (or cable) TV programs with high quality sound, using a HI-FI VCR. With a video monitor or TV receiver connected according to the CONNECTION DIAGRAM, page 10 proceed as follows:

(1) Set the INPUT SELECTOR of the HI-FI VCR, connected to the TAPE/VIDEO-3 inputs, to the TV or TUNER position.

(2) Depress the TAPE (monitor) and TAPE/VIDEO-3 button on the LV-117.

(3) You can now view any channel selected by the HI-FI VCR's tuner.

(4) A recording of the selected TV program can also be made, while watching and listening to high quality sound, by placing the VCR in the RECORD mode.

If you have a TV monitor with stereo audio outputs, these may be connected to the FRONT or REAR LD/VHD jacks for independent TV operation with high quality stereo sound. Proceed as follows:

(1) Turn the power OFF to the VCR connected to the TAPE/VIDEO-3 jacks on the LV-117.

(2) Place the INPUT SELECTOR of the LV-117 in the LD/VHD position.

(3) Set the INPUT SELECTOR of the TV to the TV position and tune desired channels.

NOTE: Be sure to consult the owner's manuals of the VCR, TV monitor and other A/V units for specific operational details.

IN CASE OF DIFFICULTY

If you encounter a problem, please review the items in the following check list. Also, be sure to thoroughly check other connected components, such as speakers, turntable, CD player, tuner, DAT deck, cassette deck, equalizer, etc.

PROBLEM	PROBABLE CAUSE AND SOLUTION
Power Does Not Come On	● Check line cord to ensure good connection at AC outlet.
No Sound	● Incorrect Input selected. Check input leads on back panel (be sure they match input selected). ● TAPE (monitor) button (item #7) set to IN position without tape decks connected or TAPE DECK LINE/SOURCE switch in wrong position). ● SIGNAL PROCESSOR switch in (ON) (without processor turned on or connected). ● Incorrect SPEAKER switch setting or rear panel SPEAKER LEAD connections. (Check for shorted speaker leads). ● DIGITAL DIRECT switch is ON when attempting to use other source. Switch to OFF position. ● Line inputs and outputs of a connected tape deck are reversed.
No signal to tape deck for recording	● Be sure RECORDING-OFF button is set to ON and RECORDING-OFF button is OFF.
Distorted Sound Shuts off at High Volume levels	● Speaker Impedance too low (less than 2 Ohms). Check speaker specifications. ● Two speaker systems of less than 4 ohm each are in use. Select only one system at a time when playing at high volume levels.
No Output when LD/VHD input selected	● FRONT/REAR LD/VHD switch in wrong position.
Sound, but No Video	● Be sure line inputs and outputs of both the audio and video jacks of the connected VCR, LD, etc., are connected. See connection diagram.

CARE AND MAINTENANCE

CLEANING
The durable finish of the knobs and heavy aluminum front panel will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders, or harsh chemical agents, such as lye solution. These will mar the finish. Clean with a soft, lint-free cloth or cotton swab slightly dampened with a mild solution of detergent and water.

REPACKING FOR SHIPMENT
Should it become necessary to ship your LV-117 for any reason, use the original packing materials. If these are no longer available, be sure that adequate materials, at least equivalent to the original, are used.

REPAIRS
Only the most competent and qualified service technicians should be allowed to service the LV-117. The Luxman company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty, call the toll free telephone number listed on the Warranty to obtain the name and address of the Luxman Authorized Service Station nearest your home or business. In many cases, the dealer where you purchased your Luxman unit will be equipped to provide service.

SPECIFICATIONS

Rated Output Power (20 Hz — 20 kHz) 110W + 110W/8Ω
130W + 130W/6Ω
108W + 108W/4Ω

Dynamic Power 175W/8Ω
325W/4Ω
462W/2Ω

Total Harmonic Distortion (8Ω/110W) 0.015%
(20 Hz — 20 kHz)
0.005% (1 kHz)

Input Sensitivity & Impedance
(CD, Tuner, Line) . . . . . 150mV/47kΩ (±10%)

Signal-to-Noise Ratio (A-weighted,
Input shorted) . . . . . Line: 100 dB

Frequency Response
(CD, Tuner, Line) . . . . . 1 Hz — 150 kHz (—3 dB)

Tone Control . . . . . Bass: ±9 dB (100 Hz)
Treble: ±6 dB (10 kHz)

Loudness Control . . . . . + 6 dB (100 Hz)
+ 5 dB (10 kHz)

D/A Section:
Output 2V
S/N . . . . . 96 dB (IHF-A Filter)
THD . . . . . 0,006% (1 kHz)
Separation . . . . . 80 dB (1 kHz, B.P.F.)
Frequency Response . . . 5 Hz — 20 kHz (±0.5 dB)
Dynamic Range . . . . . 91 dB

Video Section . . . . . Input/Output: 1Vp-p/75 ohms
DP, DG: 1°, 10%

Dimensions . . . . . 438(W) x 166(H) x 422(D) mm

Weight . . . . . 15.7 kg

Specifications and appearance design are subject to change without notice.

EINFÜHRUNG

HERZLICH WILLKOMMEN

Luxman begrüßt Sie zu der wachsende Schar von einsichtsvollen Audiophilen die Luxman Audio- oder Audio-Videogeräte besitzen und benutzen. Wir sind sehr stolz über unsere lange Tradition von Vortrefflichkeit in akustischer Qualität, für die der Name Luxman steht. Diese Anleitung ist vorbereitet worden, um Ihnen einen maximalen Genuß der hervorragenden Leistungen und Merkmale des neuen Luxman LV-117, zu ermöglichen.

Dieser integrierte Verstärker erfüllt höchste Ansprüche der Klangreinheit. Spannungsgetriebene Verstärkung mit FET, dreifach differentielle Eingangsebenen, dreifache Darlington Ausgänge und Antriebstopologie, optische und koaxiale direkt-digitale Eingänge mit eingebautem DAC, vierfacher Oversamplings-Filter, Hochstrom/Hochspannungs-Ausgang auf niedrige Lastimpedanz, massive Stromversorgung und Wärmeableitung . . . . dies alles trägt zur Erreichung des Ziels bei.

Um die auserordentliche Leistung dieses Luxman LV-117 voll ausnutzen zu können, ist es notwendig, daß die mit diesem Gerät benutzten Signalquellen und Lautsprechersysteme von höchster akustischer Qualität sind. Wir empfehlen daher komplementäre Komponenten von Luxman, wo immer möglich.

Bitte lesen Sie diese Anleitung aufmerksam durch, um mit den besonderen Merkmalen, der Bedienung und den Möglichkeiten Ihres neuen Luxman LV-117 vertraut zu werden. Sollten irgendwelche Fragen aufkommen oder Information über weitere Luxmanprodukte erwünscht werden, wenden Sie sich an Ihren örtlichen Luxmanhändler.

BEIM ÖFFNEN DES KARTONS

Bevor ein Luxmangerät die Fabrik verläßt, wird es sorgfältig auf äußere Schäden hin, als Teil der systematischen Qualitätskontrolle, untersucht. Dies sollte zusammen mit genauer, elektrischer Überprüfung, die volle Kunstfertigkeitund Leistung des Gerät sicherstellen. Nachdem das Gerät ausgepackt worden ist, sehen Sie nach ob irgendwelche äußere Schäden vorliegen. Heben Sie den Karton und das übrige Packmaterial auf, da sie das Risiko einer Beschädigung aufs Minimum bringen, und bei einem erneuten Transport wieder benutzt werden können. Sollte unvermuteterweise eine Beschädigung vorliegen, melden Sie dies sofort Ihrem Händler und ersuchen Sie den Namen des Transporteurs, damit eine schriftliche Klage zur Deckung der Transportschäden, eingeleitet werden kann.

DAS RECHT ZUR KLAGE GEGEN EINEN ÖFFENTLICHEN TRANSPORTEUR KANN VERFALLEN, WENN DIESER NICHT SOFORT INFORMIERT WIRD UND DER TRANSPORTKARTON UND DAS PACKMATERIAL NICHT MEHR ZUR VERFÜGUNG STEHEN. HEBEN SIE ALLES PACKMATERIAL AUF, BISDIE KLAGE ERLEDIGT IST.

INSTALLIERUNG UND PLAZIERUNG

Da bei der Benutzung dieses Geräts Wärme entsteht und eine ausreichende Lüftung und Kühlung des Geräts notwendig ist, empfiehlt sich einen Standort zu wählen, der diesen Anforderungen entspricht. Lassen Sie genügend Freiraum um das Verstärker herum, (mindestens 8 cm an der Oberseite und 4 cm an den Seiten und der Rückseite) zur ordentlichen Durchlüftung, frei. Der Luxman LV-117 sollte auch nicht vollständig von anderen wärmebildenden Geräten umgeben sein. Soll der Luxman LV-117 in ein geschlossenes Gehäuse gestellt werden, empfehlen sich zur Durchlüftung um den Verstärker herum, kleine Ventilationslöcher an der Rückseite. Werden diese Empfehlungen befolgt, sollte der Luxman LV-117 in jeder vernünftigen Umgebung zu außerordentlichen Leistungen fähig sein.

Natürlich sollten selbstverständliche Berücksichtigungen, wie Schutz vor übermäßiger Verstaubung und Feuchtigkeit, immer beachtet werden. Der Luxman LV-117 integrierter Verstärker ist mit sorgfältig gewählten Komponenten von sehr hoher Qualität ausgestattet, und Bedienung, unter Beachtung der Anleitung, sollte eine langzeitliche und uneingeschränkte Leistung des Geräts möglich sein.